38th Annual Meeting, APS Division of Plasma Physics
11-15 November 1996, Denver, CO
Abstract Submittal Form

Deadline: Wednesday, 10 July 1996

Subject Classification Category _____ ☐ Theory ☐ Experiment
(Refer to the DPP Subject Category list on page M19.)

UCRL-JC-124676 Abs

On interface instabilities in expanding plasmas

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In both astrophysical and ICF situations, interface perturbations grow due to hydrodynamic instability development. For nonplanar geometry, the effective perturbation wavelength changes, as do the density profiles, compared to planar geometry, both of which affect the instability evolution. We will present comparative studies of instability development for planar, cylindrical and spherical geometry. Qualitative differences between instability evolution for the different geometries, and between expanding versus converging environments will be made. The analytical and numerical modeling were used to design Nova experiments, which emulate the evolution of instabilities in supernova. *Work performed under the auspices of the U.S. Department of Energy by the Lawrence Livermore National Laboratory under contract number W-7405-ENG-48.

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